Access to Microfinance & Improved Implementation of Policy Reform (AMIR Program)

Funded By U.S. Agency for International Development

Define Policies and Procedures for the Depository

Final Report

Deliverable for Capital Markets Component
Task No. 5.7.6
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This report was prepared by Bill Gorman, in collaboration with Chemonics International Inc., prime contractor to the U.S. Agency for International Development for the AMIR Program in Jordan.

ISIN

The Ninth Recommendation of the Group of Thirty calls for the establishment of an International Securities Identification Numbering (ISIN) system. The International Standard provides a uniform structure for ISINs. It is intended for use in any application in the trading and administration of securities. ISIN is a code that uniquely identifies a specific securities issue. An ISIN consists of the following:

a) **a prefix** which is the alpha-2 country code as found in the ISO 3166 publication titled Codes for the representation of names of countries.

b) **the basic number**, which is nine character (letters and/or digits) in length. Where the existing national number consists of nine characters, this number shall be used; where the existing national number consists of fewer than nine characters, this also shall be used, but zeros shall be inserted in front of the national number. Where a national check digit exists, it shall be regarded as part of the basic number within the nine characters;

c) a **check digit**, computed according to the modulus 10 "Double-Add-Double" as described in annex A.

Because the Securities Depository Center (SDC) is the first occurrence in Jordan of the "administration of securities", the SDC needs to establish the ISIN standard in Jordan. There are a series of tasks that must be accomplished in order to do this. They are as follows:

1. Establish the ISIN Agency of Jordan
2. Use the ISO 6166 country code for Jordan JO as the first two characters
3. Establish the **basic number** (national numbering system). See Annex B
4. Delegate maintenance of the national numbering system to the ISIN Agency of Jordan.
5. Establish procedures for Issuers to interface with the ISIN Agency for issuance of the national (basic) number.

An ISIN Agency should perform all of the above steps either directly or under its direction immediately or as soon as practicable. We recommend that the ISIN Agency be set up within the SDC as it has the most at stake in seeing that the job is done well.

The address for the Registration Authority is

Registration Authority for ISO 6166
c/o ANNA S.C.
1. rue de Varente
CH - 1211 Geneva 20

As soon as JSC creates the ISIN Agency function and delegates the responsibility to the SDC they must explain to the SDC what they have taken responsibility for. JSC should have them create the interface procedures between them and the issuers and the ISIN Agency.

ANNEX A

CHECK DIGIT

A check digit based on the Modulus 10 Double Add Double technique will be assigned to each ISIN and National Numbering System (NNS).

The illustrations below will clarify the manner of calculation of a Modulus 10 Double Add Double check digit.

NNS NUMBER 83764912

8	3	7	6	4	9	1	2
X 1	X 2	X 1	X 2	X 1	X 2	X 1	X 2
8	6	7	12	4	18	1	4

Thus, 8 + 6 + 7 + 1 + 2 + 4 + 1 + 8 + 1 + 4 = 42

The complement of the last digit of the sum becomes the check digit. The complement of 2 is 8; therefore, the NNS number with check digit would appear as 837649128.

Alpha characters and their equivalent numerical values

A = 10	F = 15	K = 20	P = 25	U = 30
B = 11	G = 16	L = 21	Q = 26	V = 31
C = 12	H = 17	M = 22	R = 27	W = 32
D = 13	I = 18	N = 23	S = 28	X = 33
E = 14	J = 19	O = 24	T = 29	Y = 34
				Z = 35

To avoid confusion, the alphabetic characters O and I should not be used, but that would not impact the numeric values contained in the table of equivalents above.

The same principles applied here would be used for calculation of the check digit for the ISIN number. The ISIN number check digit can obviously only be calculated after the NNS check digit has been calculated.

ANNEX B

JORDANIAN SECURITIES NATIONAL NUMBERING SYSTEM (NNS)

BACKGROUND—An example of a comprehensive National Numbering System is the CUSIP system used in the US. The CUSIP rules are overwhelming for a country just beginning to establish their capital markets. The following approach uses CUSIP rules as scaled down models which theoretically can be expanded as the needs demand. The CUSIP DIRECTORY booklet published by the CUSIP Agency by Standard & Poor's, a division of McGraw Hill, Inc. 25 Broadway, New York, New York 10004.

INTRODUCTION

Who Controls the NNS?

The National Numbering Agency should control the operation of the NNS. It should operate for the benefit of all issuers and market participants engaged in transactions requiring the use of a securities identifier. As time progresses it may be desirable to delegate the administrative work associated with the maintenance of the NNS. However all decisions relative to the make up of the numbering system and the rules applied to it should remain in the hands of an advisory board set up at the appropriate time when interest in the numbering system goes beyond the National Numbering Agency and the Issuers.

What Securities are covered by the NNS?

General interest is the primary consideration in determining what securities are covered by the NNS identification system, provided appropriate documentation is supplied to the NNS Bureau in requesting the assignment of a NNS number. What follows are the types of documents that should be sent to the NNS Bureau with a cover letter requesting NNS assignment:

SITUATION	DOCUMENT REQUIRED
PUBLIC OFFERING OF EQUITY OR DEBT	PRELIMINARY PROSPECTUS OR REGISTRATION STATEMENT

This list will grow as the Jordanian Capital Markets mature.

THE NNS NUMBERING SYSTEM

The NNS number consists of nine characters: a base number of six digits known as the issuer number, and a two character suffix known as the issue number. The ninth character is a check digit, which is described in ANNEX A.

Issuer Number—In many countries, attempts are made to assign numbers in rough alphabetical order. By the careful assignment of issuer numbers to corporations according to where they fit in the alphabet, the numerically sorted issuer number will yield an alphabetically sorted file. In time this can be expanded to incorporate municipal, and governmental issuers. To achieve this relationship between a numeric number and its corresponding alphabetic representation, provisions in the numbering system will have to be judicious in the way that gaps are set up in the six digits allowed. A review of the telephone directory or other known naming conventions should give a clue as to how best to gap the numbers to prevent running out of a particular range of numbers too soon. The CUSIP numbering system as utilized in the United States leaves the numbers 900 to 989 in each group of 1,000 numbers available for future file expansion. These overflow numbers are assigned in ascending sequence to any new issuer that cannot be accommodated at the proper alphabetical position in the preceding group of issuer numbers. Such names are always in a positively identifiable position as the number assigned will contain a 9 in the hundreds position. Jordan could do something similar.

Issue Number--The issue number uniquely identifies each individual issue of an issuer. The issue number consists of two numeric characters when assigned to equity securities and two alphabetic characters-or one numeric and one alphabetic character--when assigned to fixed income securities (this permits the user to differentiate between issues in the two groups).

Issue numbers are assigned in sequence as each issue is originated. Issue numbers for equities are assigned commencing with the number 10 (blanks in the issue number position indicate this is an issuer that has not issued any securities yet) and subsequent issues are given the next higher tens position. If there is no more room for issue numbers under this scheme, the granting of additional issue numbers can be done by starting with the number 88 and issuing in descending sequence, numbers that have not been assigned.

Check Digit--In data transmission, when accuracy of the number may represent the only means of identification, or when trying to prevent transcription errors in recording handwritten data, the use of a check digit becomes mandatory as it proves the means of means of mathematically determining the accuracy of the whole number transmitted or recorded. For this reason it is necessary to use the full nine digits of the NNS.

A check digit based on the Modulus 10 Double Add Double technique will be assigned to each NNS number. Modulus 10 was selected over the other systems because it provides the greatest degree of reliability without the loss of any available numbers.

THE NNS DESCRIPTIVE SYSTEM

Besides developing a standard method for identifying issuers and issues as just discussed, there is a need for a standard security description system to provide for a consistent and concise description of an issue for use throughout the securities industry.
The descriptive system provides that each security shall be uniformly identified with a description which includes the following three elements of data arranged in the order shown:

1: The NNS number (i.e. the nine character issuer and issue number plus check digit)
2: The issuer's name in a standard abbreviated form
3: The description of the issue

The details of the specifications for the uniform issuer's name and description of the issue follows.

General Specifications for Security Descriptions

A. All security descriptions shall be based on the following specifications.

B. There shall be one standard name description for an issuer, and this description shall be used for all issues of that issuer. The rules for abbreviation outlined herein shall be mandatory rather than permissive.

C. The maximum length of a complete security description (issuer and issue data) shall be one hundred and twenty (120) characters, including spaces. It shall be structured to produce a description of no more than four (4) lines of thirty (30) characters each.

D. The last word of a line shall not be split or hyphenated. For the purpose of this rule, rates and dates shall be considered as single words.

ILLUSTRATION:

4,50%
06/06/1995

E. Punctuation marks, including parentheses, hyphens, and other special characters shall not be used in the issuer or issue description except when specifically required by these specifications.

ILLUSTRATION:

Rates	4,50	4,50%
dates	15/07/1995-2000	

A space shall be substituted whenever a punctuation mark or special character is dropped unless the resulting description would be ambiguous.

ILLUSTRATION:

B/G Foods Company
becomes
B G FOODS CO

Twenty-Nine Palms, California
becomes
TWENTY NINE PALMS CALIF

A space will always be used in an issuer's name whenever it also appears in the issuer's legal name.

ILLUSTRATION:

MAC DONALD CO
LA SALLE BUILDING CO

F. The words "a" "of", and "in" shall always be omitted from the description. The word "the" shall also always be omitted from the description except when custom dictates that "the" is the prime word for alphabetic sequencing of the issuer name.

ILLUSTRATION:

The Commonwealth Airlines Company of New York
becomes
COMMONWEALTH AIRLS CO N Y

The Dalles, Oregon
becomes
THE DALLES ORE

G. One space shall separate all "words" within the issuer's name and issue description.

ILLUSTRATION:

The M. A. Abbott Company Preferred Convertible $4.25
becomes
ABBOTT M A CO PFD CONV 4,25

RULES CONCERNING THE ISSUER'S NAME

The description of the issuer's name shall conform to the following rules. However, under certain circumstances, in order to comply with the basic requirement of fitting the description within 120 characters (4 lines of 30 characters each), these rules may be amended at the discretion of the ISIN Agency.

A. The first word of the issuer's name after rearrangement (that is, the word that determines the alphabetic segment in which the issuer will be filed) generally will not be abbreviated except if it is a compound word and custom dictates its abbreviation or if it is the only word which can be logically abbreviated to fit the full description within the maximum number of lines.

ILLUSTRATION:

The Saint Louis Glass Company
becomes
ST LOUIS GLASS CO

City of Saint Paul, State of Minnesota
becomes
ST PAUL MINN

B. When two or more of the terms "company," "incorporated," "corporation," and "limited" appear at the end of a name, the first of the terms will be eliminated unless more than one is required to distinguish between two separate issuers or an ampersand or the word "and" immediately precedes the two terms.

ILLUSTRATION:

Berry Brake Company Incorporated
becomes
BERRY BRAKE INC

ABC Company Limited
and
ABC Company Incorporated
becomes
ABC LTD
and
ABC INC

Parsons and Company Incorporated
becomes
PARSONS & CO INC

R. Hoe & Company Incorporated
becomes
HOE R & CO INC

C. Compound words will be considered as one word. They will not be rearranged and will be abbreviated only when they appear as other than the first word except when, as previously stated, custom dictates otherwise.

ILLUSTRATION:

ST LOUIS
NEW YORK
DEL RAY BEACH
WEST PALM BEACH

D. When all or a portion of an issuer name is comprised of single letter, with or without punctuation marks, packed (unspaced) or unpacked (spaced), each letter will be treated as a separate word and the issuer name will be sequenced accordingly. However, when a title is comprised of packed letters that are by custom pronounceable, these will be treated and sequenced as one word.

ILLUSTRATION:

A.M.D.G. -- *printed* A M D G -- *sequenced* A M D G
ACD -- *printed* A C D -- *sequenced* A C D
SCM -- *printed* S C M -- *sequenced* S C M
ABEX -- *printed* ABEX -- *sequenced* ABEX
AMP -- *printed* AMP -- *sequenced* AMP

E. When an issuer name includes a number in alpha form, the alpha form will be used when it is the first word, and the entire number will be treated as if it were a single word. When the issuer's corporate name is numerically expressed it will appear in that form. However, such numeric names will be sequenced as though they were alphabetic.

ILLUSTRATION:

The Two George Street Company
becomes
TWO GEORGE STR CO

18 Jones Street Company
becomes
18 JONES STR CO
but will be sequenced as
EIGHTEEN JONES STR CO

1010 Corporation
becomes
1010 CORP
but will be sequenced as
ONE THOUSAND TEN CORP

F. Prefixing initials, first names, or descriptive words will always follow the basic name except where custom dictates otherwise, and will be sequenced accordingly.

ILLUSTRATION:

J.P. Stevens Company
becomes
STEVENS J P CO

Walt Disney Productions
becomes
DISNEY WALT PRODTNS

Eli Lilly Company
becomes
LILLY ELI CO

Alan Wood Steel Company
becomes
ALAN WOOD STEEL CO (Custom dictated)

G. The issuer name for all banks and trust companies will be followed by the city and state or province, abbreviated, in which the legal address of the bank or trust company is located, except where the city, state or province is part of the actual issuer name.

ILLUSTRATION:

Chase Manhattan Bank
becomes
CHASE MANHATTAN BNK NEW YORK

H. When a corporate issuer's (other than a bank or trust company) name is not by itself sufficient to make it unique in relation to other present issuers having the same name, the place or incorporation will be added.

ILLUSTRATION:

Empire Life Insurance (Incorporated in California)
and
Empire Life Insurance Company (Incorporated in New York)
becomes
EMPIRE LIFE INS CO CALIF
and
EMPIRE LIFE INS CO NEW YORK

RULES CONCERNING THE DESCRIPTION OF AN ISSUE

The description of the issue will contain the following elements of information in the sequence indicated, depending on the type of security being described:

EQUITY	FIXED INCOME
a. Class—common, preferred, etc. Modifier words should precede the class. The modifier word "convertible" shall follow the class and immediately precede the rate or conversion date, if required.	To be filled in at future date.
Par Value, if required	
Dividend rate, if stated	
Expiration date, if any	

The description of an issue shall conform to the following rules. However, under certain circumstances, in order to comply with the basic requirement of fitting the description within 120 characters (4 lines of 30 characters each), these rules may be amended at the discretion of the ISIN Agency.

A. The word "common" will always be substituted for the words intended to be synonyms for "equity", such as capital.

ILLUSTRATION:

Empire Aircraft Company Capital
becomes
EMPIRE AIRCRAFT CO COM

B. Supplemental modifier words such as cumulative, noncumulative, dividend, non-dividend will always be omitted from the issue description except when they are required to distinguish between two otherwise identical issues.

C. Rates will always be expressed in JDs or as a decimal percentage. Fractions will be converted to their decimal form with a maximum of three decimal places, rounded off to the nearest thousandth. Zero decimals will be omitted from full lei or percentage rates. The following symbols will be used in expressing rates:

4-1/4% becomes 4,25%
4-1/8% becomes 4,125%
3-2/3% becomes 3,667%
4,00 becomes 4
4,00% becomes 4%

D. The description of rights, warrants, et cetera, will show only the abbreviation for the word "right" or "warrant". Expiration dates for the warrants will be shown as in the example that follows prefixed by the abbreviation "EXP". The issuer name of the issue to which the holder can subscribe will be included if it is different than the actual issuer of the warrants. Once a NNS issue number is assigned for rights it will be retained permanently to provide for future issues.

ILLUSTRATION:

Abacus Manufacturing Company Rights to Subscribe to 1/10 Share Common Expires July 1, 1991
becomes
ABACUS MFG CO RTS

Consolidated Oil and Gas Company Warrants to Purchase 1/4 Share Worldwide Energy Company Limited Expires July 20, 1995
becomes
CONSOLIDATED OIL & GAS CORP WT PUR COM WORLDWIDE ENERGY LTD EXP 20/07/95

DIRECTORY CONVENTIONS

A. Cross Referencing--Name Changes

Name changes which alter the alphabetic sequence of the issuers will necessitate assignment of new numbers. The old numbers will be cross-referenced with information lines.

Curriculum Vitae

Name:	**van Zadelhoff**
Given Names:	**Nicolaas (Nico) Johannes Maria**
Date of Birth:	**April 18, 1941**
Nationality:	**Netherlands**
Status:	**Married**
Address:	**Floor 3, Apartment 7,** **3, Bratya Milandinovi Street** **Sofia** **Bulgaria**
Telephone:	**+359-2-9800984 (home)** **+359-2-9866873 (home)**
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E-mail:	**n_van_zadelhoff@hotmail.com**

Working experience (April, 1965 – 2000)

Nico van Zadelhoff is an IT-consultant in the Finance and Banking Industry. He has 35 years experience and as information systems expert is familiar with the trends and requirements in the industry in hardware and application software.

April 1965 – December 1985

He started his career in Philips Electronics as a programmer / system analyst (IBM 1401/1410). Via a career as system programmer (IBM-360, Philips P1000 and Siemens B2000 systems) became in 1975 project manager and consultant in the finance and banking industry. He has conceptualized, designed and headed up the development of numerous new systems especially in retail banking.

In his project management and consultant role in Philips Electronics been actively involved in following projects:

- Development of a personnel identification system for the Netherlands' government;

- Design, development and implementation of a real time scheduler for an online ordering system (RETOPS) for Philips Electronics;
- Various migration and conversion projects (Draka Cable Company, Polygram Records Company, etc.);
- Was a Philips team member in a Feasibility Study at ABN Bank to investigate and justify the Bank's investment for a future real time online (retail and whole sale) banking system;
- Philips Project manager for RABO Bank (Netherlands), in which role he was also actively involved in the design of the bank's new branch delivery system;
- Prepared a technical solution for the inter-bank giro system for the Dutch central bank (De Nederlandse Bank) in a joint venture between Tandem, Logica and Philips Electronics;
- Advised many of the Dutch banks on their network, branch and ATM delivery systems;
- Worked for 9 months as Philips project manager for ABN Bank's new branch delivery systems development.

December 1985 until July 1988

End 1985 on request of Philips Electronics moved to Hong Kong. In the 3 years he has been stationed there, involved in many projects and consultants tasks all over the Asian region.

- Worked on multiple banking projects both as consultant and project manager in Australia (NMRB, Perth Building Society, Advance Bank and the Bank of New South Wales) for branch and ATM delivery systems;
- Was project manager for the combined EFT network in Malaysia;
- Was consultant to a number of Indonesian Banks for enhancing their system capability (branch and ATM systems) and proposing new network solutions. Banks regularly visited were BN46, Bank Negara Indonesia and BRI;
- Was responsible in Philips for the ATM network for Bank Niaga;
- Involved in a network and security control (chip card based) advice for the Chinese Olympic Committee (Asian Games);
- Involved in the technical proposals for various Thai government banks (Government Housing Bank, Government Savings Bank, Bank of Agriculture and Agricultural Cooperatives and Krung Thai Bank.

July 1988 until May 1996

In 1988 on request of the Philips Thailand country manager moved to Thailand and worked as project manager on the following projects:

- Bangkok Bank for their new network, branch banking and ATM system;
- Krung Thai Bank for their new network, branch banking and ATM system

- Was involved in discussion, selection of partners and proposal preparation for the Stock Exchange of Thailand;
- Was involved in a consultant role for many of the Thai banks, including the Bank of Thailand on a variety of IT and banking business related activities;
- Started in 1990 the development of Krung Thai Bank's new retail core production banking, branch and ATM delivery systems. Development for the first phase completed in July 1992.Further developments took till July 1995 to be completed. Solution was based on SEMA's SEB10 suite of products for the nucleus of the new retail system and the products for ATM/POS handling.

In 1992 after the merger between Philips IT Industry and Digital equipment Corporation became for the next 2 years the development manager for Digital Equipment Corporation Thailand and headed the department of around 130 development staff.

- During the due diligence, headed the Philips delegation responsible for the transition of the local staff into the new company. Was together with Coopers and Lybrand responsible for the final Profit and Loss statement on which Digital had to take over this subsidiary.
- Was project manager for the design of the new retail delivery systems for the Government banks in Thailand (Government Savings Bank and Government Housing Bank)
- Was involved in the design and development of a new loan origination system for Government Housing Bank and later on for Krung Thai Bank;
- Was responsible for the design concept and implementation for Krung Thai Bank's modern (customer oriented) branch, designed together with a Swedish architect company.

In 1994 became sales manager for the Finance and Banking industry for Digital Thailand. Was responsible for profit and loss within this industry in Thailand with a sales budget of US$ 55M and a services budget of US$ 12.5M.

- Many new accounts were added to the Digital customer list such as Thai Farmers Bank, Siam City Bank, Siam Commercial Bank and Thai Military Bank.
- Was responsible for an executive information system for the Board of Management of Siam Commercial Bank.

May 1996 until August 1998

In May 1996 on request of Digital Thailand moved back to Digital Holland. Two months later on request of Tandem Computer Inc. returned back to Thailand and became senior banking and finance manager for Tandem Computers Thailand. In July 1997 Nico became country manager Tandem Thailand. As country manager his responsibility covered besides Thailand other countries in the Asian region (Vietnam, Cambodia and Laos). During this period involved in:

- Various banking projects in Thailand regarding backup and disaster recovery as required by the Bank of Thailand. Proposed a solution for Krung Thai Bank's backup and disaster recovery system, which would give the bank a 100% availability on their retail banking operations;
- Prepared proposal for the 21st century system (as SET called it) for the Stock Exchange of Thailand based on Tandem's fault tolerant concept;
- Worked on behalf of Tandem in joint venture with Price Waterhouse (Australia) on a proposal for an inter-bank system (real time settlement) for the State Bank of Vietnam. Project was initiated and would later on be funded by the Worldbank as part of their Vietnamese Bank Modernization Project;
- Also involved in discussions and presentations to various Vietnamese banks regarding new delivery systems (branch and ATM systems) in view of the Worldbank initiated project for Bank Modernization in Vietnam. Bank regularly visited were: Vietcombank, Vietnam Bank of Agriculture, Bank for Industrial Development of Vietnam and Asia Pacific Bank.
- Involved in numerous discussions and presentations to the State Bank of Vietnam in view of their requirement for improved intra-bank transaction handling of the Vietnamese Banks.

Since October 1997 involved in the merger talks between Compaq Computer and Tandem. Was responsible for the due diligence for Tandem Thailand. Early 1998 joined Compaq and became responsible for the total Tandem business (sales and services) within Compaq Thailand.

Early1998 involved in the next merger talks between Compaq Computers and Digital Equipment Corporation. Helped in this process to outline what market strategy the new Compaq company should take in Thailand and how the new company should structure their combined operations and staffing.

In August 1998 after the merger between Compaq and Digital had been finalized decided to leave Compaq and to start his own business as consultant and project manager. As independent consultant and project manager been involved in the following activities:

August 1998 till July 1999

- Worked with US-based company (East West International) for the People's Committee of Hanoi on defining their new 5 year IT Master plan;
- Advised the Banking Project Management Unit (BMPU) of the State Bank of Vietnam on a solution for a credit control system handling the international loans from the various agencies (Worldbank, Asian Development Bank, Canadian Government, etc.);
- From December 1998 until July 1999 participated (with East West International) in the IT-Feasibility Study for the State Securities Commission (SSC) of Vietnam. Feasibility study covered a review and advised the SSC on their future trading and depository systems. Task finalized with the preparation of a Request for Proposal for the purchase of required trading and depository systems.

July 1999 until today

- Worked as IT consultant and project manager for Carana Corporation in Sofia for the Bulgarian Stock Exchange, a United States Agency for International Development (US-Aid) funded project. As project manager responsible for the upgrading and modernization of hardware and application software for the Bulgarian Stock Exchange. Existing trading application to be replaced with the Regional Trading System (Russian developed application software package for trading). Handled the project from application evaluation, specification and initial implementation at the BSE-Sofia.
- During the same period and under the same contract handled the Request For Proposal, bidding, procurement and installation for the hardware replacement of the Bulgarian Central Depository systems and networking equipment including a telephone exchange.

Nico van Zadelhoff has a vast track record in the finance and banking industry. Nico is a good listener, has the ability to familiarize with local conditions and circumstances, which made him to achieve also the highest possible acceptance from local staff. On the technical side he can investigate finance and banking systems and offer solutions. He has the ability to visualize complex technical systems into a simple and understandable language and overview. He is extremely familiar with the banking industry. Nico is experienced and capable implementer of large and complex systems.

Nico works according to the principle: “listen to your customers, understand their issues and problems than get them resolved in the best possible way to the customer’s full satisfaction”.

NSC to DEP 020000404 Excel Sheet

NSC to DEP 020000404 Excel Sheet

Memorandum

To: Mohammad Amoudi

CC: Khush Choksy (Chemonics), Steve Wade (Chemonics)

From: Bill Gorman

Date: August 20, 1999

Re: SDC and the Duties of a Share Registrar

It is my understanding that the Securities Depository Center (SDC) is obliged, under Jordanian Law to maintain the share registry for listed companies. If the depository chooses to proceed with the SICOVAM software, your organization will need to acquire or create software to perform the functions normally associated with a Registrar and Transfer Agent. In our discussions, I promised to prepare and send you a summary of those functions. The following summary is one that I adapted from a memorandum prepared by a long-time Registry expert Mr. Dick Smith.

Summary of the Duties of a Securities Registrar

There are (a) certain functions that a share registrar must perform for any enterprise whose register it maintains; (b) other functions it must be capable of performing, although some enterprises may choose to perform them themselves; and (c) functions that a registrar need not necessarily be capable of performing, but which it is in a unique position to perform.

(a) For any register it maintains, a share registrar must:

1. Maintain accurate security registers. This is the most obvious of its duties.

2. Be familiar with, and in compliance with, all laws, regulations, or other directives that relate, directly or indirectly, to share register maintenance or to any of the duties of a registrar.

3. Ensure that all persons with access to information contained in any share register treat such information as confidential to the extent required by laws, regulations, or any other directives.

4. Ensure that at all times security registers are in balance and that for every share issued, a share is cancelled.

5. Record transfers of ownership after receipt of all necessary documents. All elements in a capital market rely on the registrar's record of ownership.

6. Record changes or corrections of information regarding security holders and their securities holdings.

7. Record and monitor records of pledges, lost certificates, adverse claims, or other transactions, which result in the blocking of securities.

8. Issue, cancel, and control the inventory and storage of certificates for enterprises that issue materialized securities.

9. Produce lists of security holders, both security holders of record, and beneficial owners of securities in Nominee name if required by Law or regulation, as required or requested by an enterprise or other authorized body. Such lists may be required to determine which security holders are entitled to receive dividends or interest, to attend and vote at meetings of shareholders, or to participate in other activities of the enterprise.

(b) A share registrar must also be able to:

10. Interface with a Central Securities Depository.

11. Process dividend and interest payments, including calculation, distribution, and accounting.

12. Withhold and/or account for taxes on dividend and interest payments, if required by tax laws.

13. Withhold and/or account for taxes on capital gains, if required by tax laws.

14. Produce reports of dividend, interest, or capital gains, if required by tax laws.

15. Notify shareholders, both shareholders of record, and beneficial owners of share held in Nominee name if required by Law or regulation, of shareholder meetings, by mail, publication, or other methods.

16. Produce, distribute, and calculate proxies or other media for shareholder voting.

17. Perform operations to reflect ownership of securities when enterprises participate in a merger, a spin-off, or other reorganization.

18. Perform operations to reflect ownership of securities when an enterprise splits or consolidates its shares.

(c) It is desirable, but not absolutely necessary, that a share registrar be able to:

19. Modify any software used in share register maintenance to reflect changes in law, innovations, or elimination of problems detected. If the registrar cannot perform this work with its internal staff, it should be out-sourced.

20. Assist enterprises in the planning for, and conduct of, their shareholder meetings.

21. Educate managers of enterprises and security holders of the rights of shareholders, the responsibilities of management to shareholders, and the relationship between management and shareholders.

22. Educate managers of enterprises and security holders of laws, regulations, or other directives relating, directly or indirectly, to share register maintenance or to any of the duties of a registrar.

Settlement and Registration of Electronic Trades

DRAFT – 6 April, 2000

Order Entry:

1. Broker receives Buy /Sell order from client.

2. Broker sends order to Amman Stock Exchange (ASE) trading floor.

3. Floor Broker enters order into ASE's automated trading system (ATS).

    a. The Broker's Client Reference number is entered with the order. This is the number that a firm assigns to its client. It is a mandatory field. It must be identified in the SDC Client Identification system. That system assigns a unique SDC number to each client.

    b. ATS reports orders to the submitting broker's floor terminal at time of entry. The Broker's Client Reference Number appears on the screen report.

    c. ATS disseminates information about all open orders to all brokers via the ASE/SDC network. No broker or client data is disseminated.

    d. ATS disseminates order information to the public via Reuters, Access and StockNet Live (SNL). No broker or client data is disseminated.

Trade Execution:

4. T+0: Deal is struck via the exchange's automated order match (trading) system.

    a. ATS reports trades to the buying and selling brokers on their Trading Floor workstations immediately upon execution.

    b. ATS reports each trade to ASE brokers via the ASE/SDC network.

    c. ATS reports each trade to the public via Reuters, Access and StockNet Live (SNL).

    d. At the end of each trading day, the exchange delivers to each broker, a printed report listing the trades they executed that day.

Clearing and Settlement:

5. T+0 The trade data is received by the SDC via diskette from the ASE.

6. Received data is loaded into SDC computer system.

7. SDC system checks if each trade has a valid SDC Client Reference Number.

    a. Each broker must know the SDC Client Reference Number for each of his clients and must supply accurate Client Reference Numbers to all trades. Brokers who supply inaccurate information may be penalized.

8. Each broker performs an on-line check of his buy and sell contracts via his SDC workstation.

    a. The buying broker delivers a cheque to the selling broker. The selling broker then confirms the transaction on his SDC workstation.

    b. If the selling client has a certificate, the broker must deliver it to the Issuer prior to settlement. SDC will deliver certificates for its participants to the issuers on a no obligation envelope-delivery type service.

9. The broker checks if the trade should be allocated to multiple client accounts. NOTE: Allocations are permitted only for approved accounts and as instructed by the buying and/or selling client.

10. The broker on his SDC workstation confirms the contract.

11. The SDC system inserts buying and selling client information (name, SDC number, address, etc.) on a Transfer Deed (contract). SDC prints the Deed and then stamps and signs id and delivers it to the Issuer. No obligation is assumed by the SDC other than to promptly deliver the deed to the Issuer.

Registration:

12. The shareholder department of the relevant listed company updates its shareholders list (Register) and back-dates beneficial ownership to T. By default, SDC assume the deed is correct unless it is returned to the SDC within three business days.

13. Brokers and Custodians periodically reconcile holdings with the Issuers.

Ziad,

Ref: document dated 10 Apr 2000, To AL-BASHA Z HBME JOM CNC MGR, From TELFER B HBAP ASP CNC MGR, Subject Settlement Flows

The SDC Client Reference Number is assigned by the SDC. It is a unique number that is assigned to every client identified to the depository. Brokers assign their own unique reference number to their clients.

This use of two reference numbers is intentional. Its purpose is to preserve confidentiality of client information and to provide the brokers an easy shorthand method of identifying their clients on each order submitted to the exchange's automated trading system. A client's SDC number is never revealed to the trading system, as brokers use their own client number when submitting orders to the trading system. The broker only for settlement uses the SDC number. Client's, when interfacing with the SDC, will identify themselves via the SDC Client Reference Number.

As mentioned above, the SDC assigns a unique SDC number to each client identified to it. For Jordanian citizens, we use the National ID Number. For all other clients, we are generating a unique randomized number. We are in the initial stages of establishing client numbers. We welcome any suggestions that HSBC and/or its clients might have that would improve our client identification system.

We are not currently generating Electronic Deeds for any trades at this time and cannot do so until our Board and the Jordan Securities Commission have approved the rules and procedures for handling Electronic Deeds. We are however, running the system in a "shadow" mode as an on-going test and verification of the system.

The SDC is not ready to undertake safekeeping functions at this time. We are currently developing software and procedures designed to ensure establishment of accurate and secure Shareholder Registers. These will form the foundation of our depository. We will be providing all of our participants with regular updates through official announcements and via our Web Site www.sdc.com.jo that is currently under construction.

It is correct that the transfer of trade information from the Amman Stock Exchange's automated trading system to the SDC is via diskette. The key reason for this is the fact that the exchange must merge the data from two trading system Archive Files in order to deliver the information we need for settlement. We are hopeful that the exchange will, in the future, be able to provide us these data via a real-time, on-line computer-to-computer link.

I trust that the above answers the questions posed to us. If not, please call, fax or e-mail me. I and the SDC will make every effort to address HSBC's queries as well as those of our other participants. We sincerely appreciate your questions and your support in our development of a "Model" depository in Jordan.

Best regards,

Bill Gorman

Registry – Server Requirements

Securities Depository Center

May 2, 2000

Background

The Securities Depository Center (SDC) in collaboration with the AMIR Program of USAID is developing a modern Central Securities Depository and Registry for Jordan. These systems are being developed using USAID provided software. They are based on systems employed in similar markets. Establishment of a Register is the first and most urgent phase, in creating a fully functioning depository. This document defines the server computer needed to develop and maintain that Central Registry system.

Key System Requirements

The following are the general hardware, software and networking specifications for the SDC Registry Server system.

- The new server should run the UNIX Operating System for RISC Processors. For the internal disks a level Raid 5 or Raid 1 (preferred) will be proposed to guarantee a higher degree of safety and the integrity of SDC's Oracle database.
- One router including firewall will be required. The equipment (computer and network component) required should be mounted in a rack (19 inch).
- On an application level, the system should support both the English and Arabic language and character sets. Software for virus protection should be provided.
- There will need to be well-defined interfaces to the auxiliary registers that can be changed over time.
- The system will be implemented as a three-tier client/server system.

Capacity Assumptions

In analyzing server and system capacity requirements, the following numbers are being used.

Listed main board companies	300
Second-tier market companies	3500
Over-the-counter securities	1500
Corporate debt issues	1000
Government debt issues (national and local)	500
Stock brokerage firms	50
Government debt broker/dealers	10
Shareholders (Depository clients)	2,000,000
Daily trades on the listed market	2,000
Daily trades on the OTC market	500
Daily Settlement transactions	5,000
Daily trades on the corporate debt market	100
Daily trades on the government debt market	100

Registry Server:

The Registry Server should have the following characteristics:

- 2 x 64 bit RISC based processors,
- Minimum performance of server with 2 processors ~ 12,000 TPM-C
- Symmetric multiprocessing (SMP)
- Memory 2 GB
- Memory fail-over and error correction options
- At least 8 – 10 (preferred) PCI slots
- Internal 40x CD-ROM or better
- Internal CD-Write
- Internal storage capacity of 4 * 18GB, SCSI, RAID-1, hot-swappable
- Three (3) SCSI controllers, two (2) for hard-disks (in pair) and one (1) for DLT
- The SCSI controllers should have possibility for external connections
- One (1) DLT tape drive, DDS2 compatible
- Three (3) 10/100MB Ethernet controller, including any on board controller
- Housed in 19" rack
- PSUs with sufficient redundancy (N + 1)
- 220 V at 50 Hz single phase
- Complete configuration with all required cables, connectors, etc.
- Remote support (including power on/off) and remote diagnostic capabilities via ASCII/WEB/paging connections
- System software UNIX
- Three year full warranty
- Hardware and software installation
- Future expansions possibilities:
  - System must be upgradeable to 4 processors
  - Fully equipped server should provide around ~ 20,000 TPM-C
  - Memory expandable to 8GB

Rack Features

- Standard 19" rack
- Console (English /Arabic keyboard, display (15" or 17"), mouse)
- Console switch panel and cabling (optional)
- Full cabling for all components in the rack

Software for Servers

- UNIX version for RISC processors
- Connectivity software for Microsoft Windows (98/NT 4.0/2000) environment
- Unlimited number of users
- Additional UNIX libraries for:
- Networking (WAN/LAN), TCP/IP based
- FTP,
- Security (C2 level security),
- Digital Signature (simple version),
- Network Management (simple version)
- Remote support (including power ON/OFF) and remote diagnostic capabilities via ASCII/WEB/E-mail connections

- Twelve month warranty

Network Equipment

Router (1 unit)

- At least 4 Ethernet ports 10/100MB and
- 4 ports Wan including X.25 and ISDN BRI
- Firewall
- Mountable in 19” rack

Clearing & Settlement Flow Chart.doc

Clearing & Settlement Flow Chart.doc

Compare Registry Software Excel Sheet

Compare Registry Software Excel Sheet

Compare Registry Software Excel Sheet

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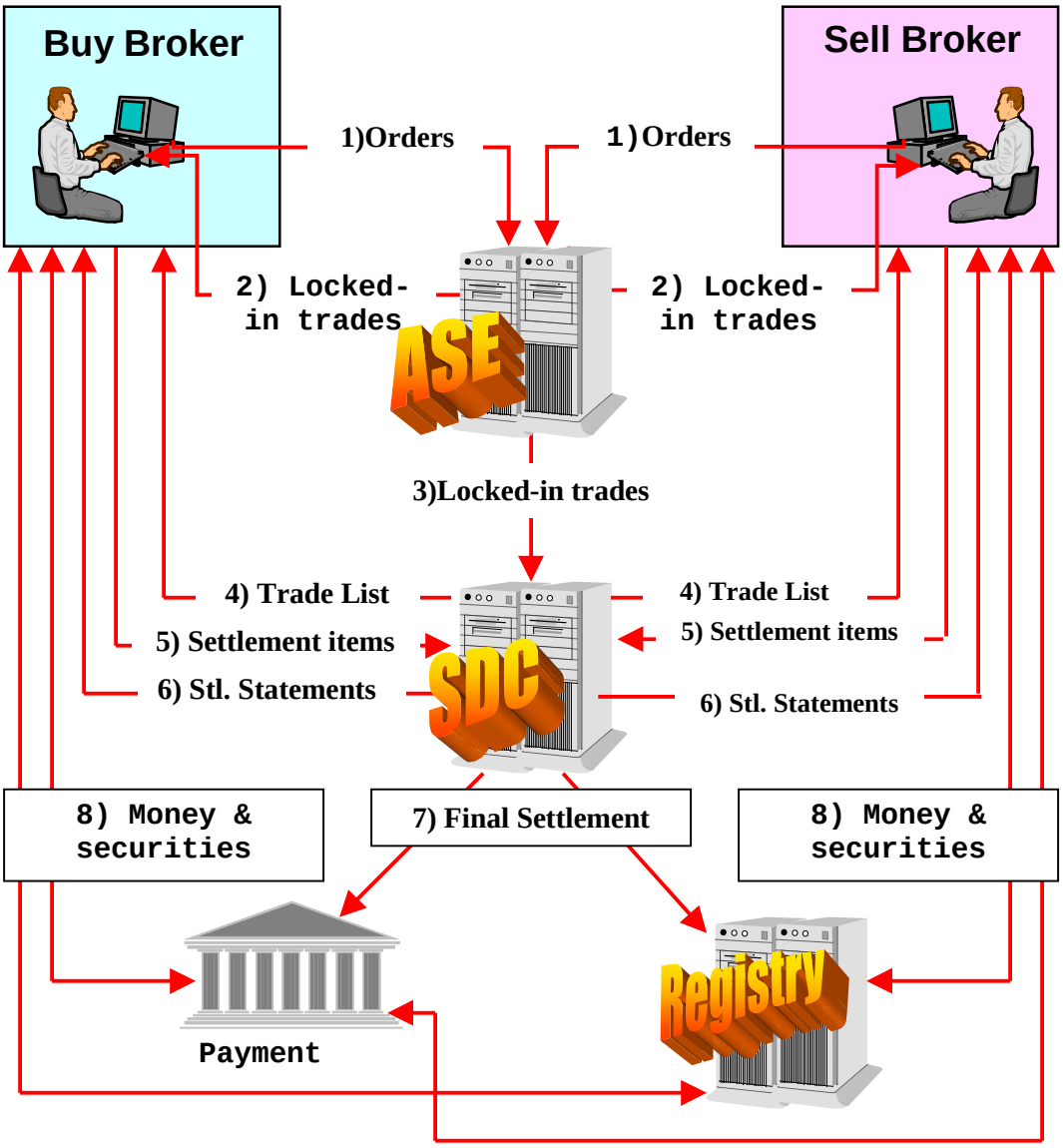
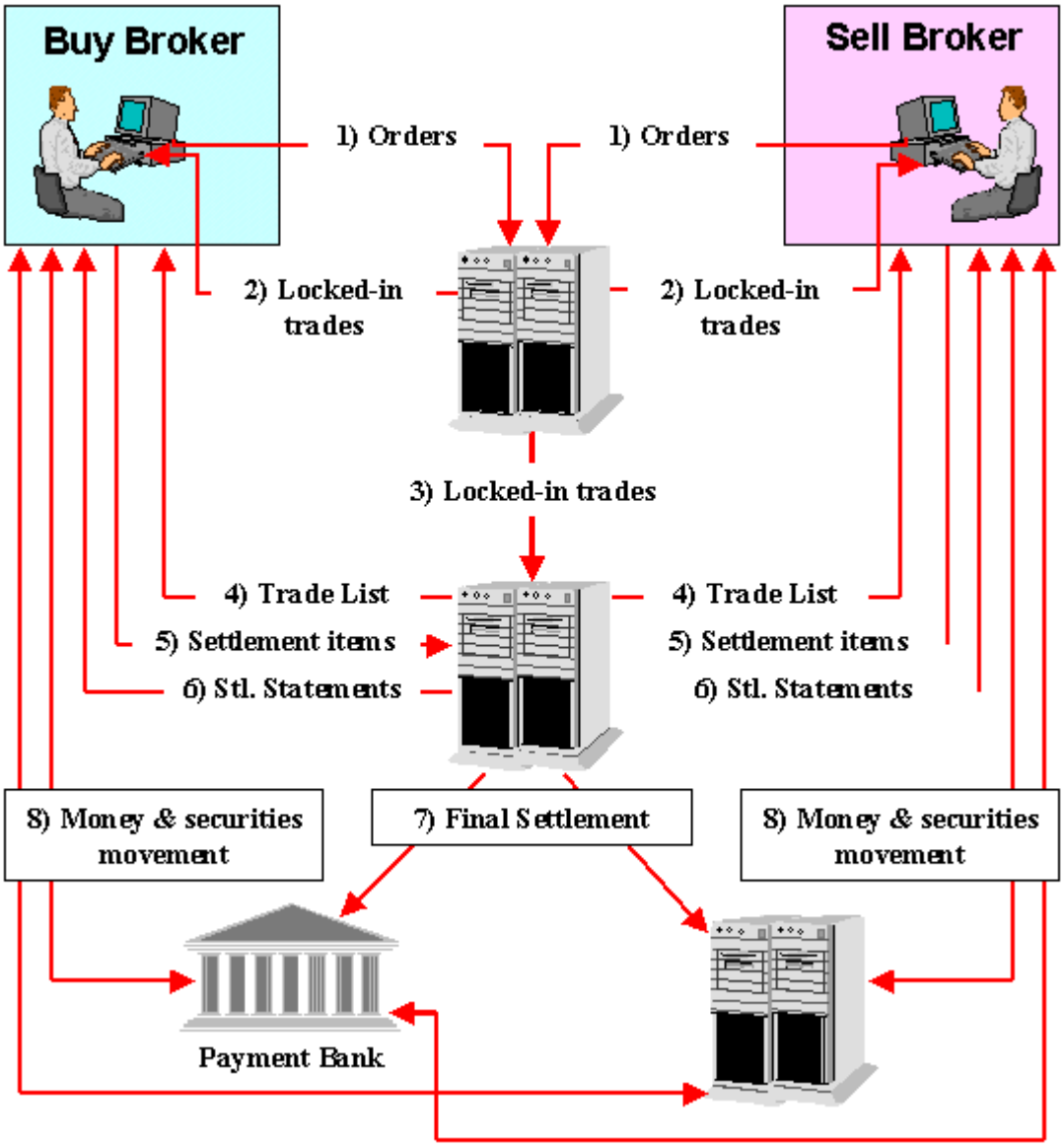
Compare Registry Software Excel Sheet

Compare Registry Software Excel Sheet


Buy Broker
Sell Broker
1)Orders
1)Orders
2) Locked-in trades
2) Locked-in trades
ASE
3)Locked-in trades
4) Trade List
5) Settlement items
6) Stl. Statements
4) Trade List
5) Settlement items
6) Stl. Statements
SDC
8) Money & securities
7) Final Settlement
8) Money & securities
Payment
Registry


Buy Broker
Sell Broker
1) Orders
1) Orders
2) Locked-in trades
2) Locked-in trades
3) Locked-in trades
4) Trade List
4) Trade List
5) Settlement items
5) Settlement items
6) Stl. Statements
6) Stl. Statements
8) Money & securities movement
7) Final Settlement
8) Money & securities movement
Payment Bank